

REMARKS

Claims 1-7 and 9-18 are pending herein.

I. Claim objections based on informalities.

Applicants respectfully note that the phrase “curved portion” of claim 9 has been amended to read “curved portions” as discussed by telephone on July 12, 2007 with the Examiner. Applicants thank the Examiner for his help. Thus, it is respectfully asserted that the claim objections have been addressed.

II. The claim rejections under 35 U.S.C. § 112.

The USPTO respectfully rejects Claims 9-15 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement.

First, on page 3 of the Office Action, the USPTO respectfully notes, “the Examiner does not understand how elasticity is linear or bent.” Applicants respectfully note that claim 9 has been amended to emphasize that it is the fins that are linear or bent. No new matter is added by these amendments. Support for the amendments can be found on page 8 of the present specification.

Furthermore, on page 3 of the Office Action, the USPTO respectfully notes,

“Specifically the Examiner does not understand what the mechanically deformed portions of said metal shield plate are, nor how the portions are fixed with said heat dissipating portions, nor does the Examiner understand what is being ‘fixed thereo.’”

Regarding the mechanically deformed portions of the metal shield plate, Applicants respectfully note that present Figure 9 shows crimped portion 17 on the metal shield plate 9. Crimped portion 17 is one possible embodiment of the mechanically deformed portion claimed in claim 9. Page 12 of the present specification explains that crimped portion 17 may be formed by crimping (i.e., mechanically deforming) the metal shield plate.

Present Figure 7 further illustrates one embodiment of how the mechanically deformed portion is fixed with the heat dissipating portion. For example, as seen present Figure 7, the crimping (i.e., mechanical deformation) creates a concave portion 14 close to the heat dissipating portion 4 of the fins. As further seen in present Figure 7, the concave portion results in a corresponding bulged portion next to the heat dissipating portion that presses against the fin and thus fixes to the fin (see pages 12-13 of the present specification for further explanation).

With respect to the phrase “fixed thereto,” it is respectfully noted that this refers to the heat dissipating portion of the fins being fixed to the mechanically deformed portion of the metal shield plate.

Thus, it is respectfully asserted that the cited elements are fully supported and enabled by the specification, and therefore the § 112 rejections have been overcome.

III. The obviousness rejections under 35 U.S.C. § 103(a).

The USPTO respectfully rejects Claims 9-15 under 35 U.S.C. § 103(a) as being unpatentable over Sasaki et al. (US 6,357,514) in view of Zeighami et al. (US 2003/0183371) and further in view of Jordan et al. (US 5,038,858). Claim 9 is an independent claim.

A. The cited references do not teach or suggest a metal shield plate press-connected to fins by forming a concave portion on both sides of the metal shield plate, as claimed in claim 9.

Claim 9 claims in relevant part:

“a metal shield plate having a plurality of slits including linear or curved ~~portion-ports~~ into which said respective heat dissipating fins are inserted along said slits, and press-connected to said ~~metal-shielding-plate fins~~ by forming a concave portion on both sides of said slits~~metal shield plate.~~”
(emphasis added)

No new matter is added by these amendments. Support for the amendments is found in present Figure 7 and on pages 12-13 of the present specification. Regarding these limitations,

it is respectfully not seen where the cited references teach or suggest the claimed structure quoted above.

Specifically, the USPTO respectfully alleges on pages 4 and 6-7 of the Office Action that Figure 7 of Sasaki teaches a concave portion at element 11. However, it is respectfully important to note that Sasaki does not teach or suggest that the metal shield plate is fixed to the fins by forming a concave portion on both sides of the metal shield plate.

In particular, it is respectfully emphasized that **Figure 7 of Sasaki only shows a concave portion formed on one side of base member 1 (i.e. the top surface), and not on both sides as claimed in claim 9.** In fact, as seen in Figure 7 of Sasaki, the bottom side of base member 1 actually has a convex portion, and not a concave portion, as claimed in claim 9. Thus, it is respectfully clear that Sasaki does not teach or suggest a metal shield plate press-connected to fins by forming a concave portion on **both sides** of the metal shield plate, as claimed in claim 9.

Additionally, Zeighami does not overcome this deficiency in the primary reference Sasaki. Specifically, Zeighami is only cited for allegedly teaching a fin fixing member to transfix the plurality of metal fins, and it respectfully does not teach or suggest anything about concave portions on the base member.

Jordan also does not overcome this deficiency in the primary reference Sasaki. As seen in Figures 1 and 3 of Jordan, **grooves 13 are only formed on the top side of base 10.** Thus, Jordan only teaches that concave portions are formed on one side of base 10, and not both sides of a metal shield plate, as claimed in claim 9.

In contrast, present Figure 7 illustrates one possible embodiment of the claimed structure quoted above. Specifically, present Figure 7 shows the heat dissipating portion 4 of a fin inserted through a slit in the upper portion 9 of a metal shield plate. **The fin and the metal shield plate are fixed together by forming concave portions 14 on the metal shield plate close to the fin.** As explained on pages 12-13 of the present specification, these concave portions can be formed by a pressing jig, for example. It is respectfully important to note that **concave portions are formed on both the top surface and the bottom surface of**

the metal shield plate, as clearly seen in present Figure 7. Thus, heat dissipating portion 4 of a fin and upper portion 9 of a metal shield plate are press-connected by forming a concave portion on both sides of the metal shield plate, as claimed in claim 9.

Thus, it is respectfully asserted that the cited references, taken either alone or in combination, do not teach or suggest all the claimed limitations of claim 9. Therefore, it is respectfully asserted that claim 9 is not obvious over the cited references.

B. Further explanation.

Applicants respectfully note the following further explanation regarding claim 9.

Applicants respectfully note that Sasaki teaches a heat sink provided with a mountain shaped fin, which is difficult to fabricate and also to fit to the base member. The mountain shaped fin is fixed to a base plate which can function as a shielding plate, but the main function of the base plate is to fix the mountain shaped fin.

In contrast to Sasaki, in the device of claim 9 a fin fabricated from a plate is inserted into the slit provided in the shield metal plate. The fin is inserted into the slit of the metal shielding plate and fixed and press-connected to the plate by forming a concave portion.

Additionally, Jordan discloses a boss on the fin to fix the fin in the grooves of a base. However, the method of fixing is different. The device of claim 9 applies a simpler method than that of Jordan, such as crimping. Crimping can be performed by a crimper or a pressing jig, for example.

Overall, one difference between the device of claim 9 and the cited references is that the metal shield plate is press-connected to the heat dissipating fins by a concave portion on both sides of the metal shield plate.

Thus, it is respectfully asserted that claim 9 is not obvious over the cited references.

C. The dependent claims.

As noted above, it is respectfully asserted that independent claim 9 is allowable, and therefore it is further respectfully asserted that dependent claims 10-15 are also allowable.

IV. Conclusion.

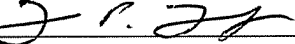
Reconsideration and allowance of all of the claims is respectfully requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Please contact the undersigned for any reason. Applicants seek to cooperate with the Examiner including via telephone if convenient for the Examiner.

Respectfully submitted,

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